

REMARKS/ARGUMENTS

Claims 18-27 are pending. In light of the following remarks, Applicant believes all the pending claims are allowable.

The Double Patenting Rejection

Claims 18-20 and 23-25 were rejected under the judicially created doctrine of obviousness-type double patenting as allegedly being unpatentable over claims 1, 6 and 7 of U.S. Patent No. 6,300,063. Applicant submits herewith a terminal disclaimer regarding this patent so the rejection is overcome.

The § 102(b) Rejection of Claims 18-27

Claims 18-27 were rejected under 35 USC § 102(b) as being allegedly anticipated by Genomics, Vol. 13, pages 1008-1017, Southern et al., 1992 (hereinafter "Southern"). Accordingly, it is being asserted that the Southern article teaches all the features of the claims. For the following reasons, Applicant respectfully traverses the rejection.

Claim 18 recites the following features:

receiving hybridization intensities for a second and third group of probes complementary to marker-specific regions upstream and downstream of the polymorphism in the target nucleic acid sequence, wherein the third group of probes differs from the second set of probes at single bases corresponding to known mismatch positions;

The cited references do not disclose or suggest utilizing the second and third group of probes as claimed.

The Office Action cites the Southern article as showing arrays and image processing techniques for rapid analysis of mutations (e.g., citing Fig. 4). Even assuming that this is correct,

claim 18 does not recite the general concept of arrays or image processing techniques. Claim 18 recites a method that utilizes probes with the specific features in the claims such as the second and third group of probes that are quoted above.

The Office Action has not shown where the Southern article discloses the second and third groups of probes that are complementary to marker-specific regions upstream and downstream of the polymorphism in the target nucleic acid sequence as claimed. As the Office Action has not shown where the Southern article teaches these features, a prima facie case of anticipation has not been established.

The § 102(e) Rejection of Claims 18-27

Claims 18-27 were rejected under 35 USC § 102(b) as being allegedly anticipated by U.S. Patent No. 6,309,823, issued October 30, 2001 to Cronin et al. (hereinafter "Cronin"). Accordingly, it is being asserted that Cronin has been shown to teach all the features of the claims. For the following reasons, Applicant respectfully traverses the rejection.

Applicant acknowledges the pioneering technologies disclosed in Cronin. However, the Office Action cites Cronin as showing a tiling strategy that utilizes two different probe sets (citing the Summary). The tiling strategy that is cited in Cronin is not the same as the features quoted above that recite second and third groups of probes that are complementary to marker-specific regions upstream and downstream of the polymorphism in the target nucleic acid sequence.

The Office Action then cites pooling strategies disclosed in Cronin (citing col. 24). As described in more detail on col. 22, the probes that vary at an interrogation position are put into pools. Each pool has different probe combinations (see the example on col. 22). Then, if any probe in a pool is complementary to a target, the pool is given a "y," otherwise if no probe in the pool is complementary to the target, the pool is given an "n." This provides unique hybridization patterns (see col. 23, lines 1-15).

The Office Action has not shown that this section of pooling strategies in Cronin disclose the features quoted above that recite second and third groups of probes that are complementary to marker-specific regions upstream and downstream of the polymorphism in the target nucleic acid sequence. Accordingly, a prima facie case of anticipation has not been established.

Conclusion

For the foregoing reasons, Applicant believes all the pending claims are in condition for allowance and should be passed to issue. If the Examiner feels that a telephone conference would in any way expedite the prosecution of the application, please do not hesitate to call the undersigned at (408) 446-8693.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Michael J. Ritter", is written over the typed name.

Michael J. Ritter
Reg. No. 36,653

RITTER, LANG & KAPLAN LLP
12930 Saratoga Ave., Suite D1
Saratoga, CA 95070
Tel: 408-446-8690
Fax: 408-446-8691